AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claim 1 (Previously presented): An isolated nucleic acid molecule comprising a nucleic acid sequence which encodes a polypeptide selected from:

(a) SEQ ID No:14;

(b) an immunogenic fragment consisting of at least 50 consecutive amino acids from SEQ ID No:14; and

(c) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 2 (Previously presented): An isolated nucleic acid molecule comprising a nucleic acid sequence selected from:

(a) SEQ ID No: 1;

(b) a sequence which encodes SEQ ID No:14;

(c) a sequence consisting of at least 38 consecutive nucleotides from SEQ ID No: 1;

(d) a sequence consisting of at least 100 consecutive nucleotides from (b).

Claim 3 (Canceled)

Claim 4 (Previously presented): A nucleic acid molecule comprising a nucleic acid sequence which encodes a fusion protein, said fusion protein comprising a polypeptide encoded by the nucleic acid molecule of claim 1 and a second polypeptide.

Claim 5 (Previously presented): The nucleic acid molecule of claim 4 wherein the second polypeptide is a heterologous signal peptide.

Claim 6 (Previously presented): The nucleic acid molecule of claim 4 wherein the second polypeptide has adjuvant activity.

Claim 7 (Previously presented): The nucleic acid molecule of claim 1, operatively linked to one or more expression control sequences.

Claim 8 (Previously presented): A vaccine vector comprising at least one nucleic acid selected from:

(i) SEQ ID No: 1;

(ii) a nucleic acid sequence consisting of at least 38 consecutive nucleotides from SEQ ID No:1;

(iii) a nucleic acid sequence which encodes SEQ ID No: 14;

(iv) a nucleic acid sequence which encodes an immunogenic fragment consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(v) a nucleic acid sequence encoding a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14;

wherein the at least one nucleic acid is capable of being expressed.

Claim 9 (currently amended): A vaccine vector comprising at least one nucleic acid encoding a fusion protein, wherein the fusion protein comprises:

(a) a first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14;

(ii) an immunogenic fragment consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14;

and,

(b) a second polypeptide <u>which is heterologous to the first polypeptide</u>;

wherein the at least one nucleic acid is capable of being expressed.

Claim 10 (Previously presented): The vaccine vector of claim 9 wherein the second polypeptide is a heterologous signal peptide.

Claim 11 (Previously presented): The vaccine vector of claim 9 wherein the second polypeptide has adjuvant activity.

Claim 12 (Previously presented): The vaccine vector of claim 8 wherein each of the at least one nucleic acid is operatively linked to one or more expression control sequences.

Claim 13 (Currently amended): The vaccine vector of claim 8 wherein the at least one nucleic acid is expressed as a first polypeptide, and wherein the vaccine vector further comprises an additional nucleic acid encoding an additional polypeptide which is heterologous to the first polypeptide and which enhances the immune response to the first polypeptide.

Claim 14 (Previously presented): The vaccine vector of claim 13 wherein the additional polypeptide comprises a *Chlamydia* polypeptide.

Claim 15 (Previously presented): A pharmaceutical composition comprising the nucleic acid of claim 1 and a pharmaceutically acceptable carrier.

Claim 16 (Previously presented): A pharmaceutical composition comprising the vaccine vector of claim 8 and a pharmaceutically acceptable carrier.

Claim 17 (Previously presented): A unicellular host transformed with the nucleic acid molecule of claim 1.

Claim 18 and 19 (Canceled)

Claim 20 (Withdrawn): An isolated polypeptide encoded by the nucleic acid molecule of claim 2.

Claim 21 (Withdrawn): An isolated polypeptide comprising an amino acid sequence selected from:

(a) SEQ ID No: 14;

(b) an immunogenic fragment consisting of at least 12 consecutive amino acids from SEQ ID No:14; and

(c) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 22 (Withdrawn): A fusion protein comprising the polypeptide of claim 21 and a second polypeptide.

Claim 23 (Withdrawn): The fusion protein of claim 22 wherein the second polypeptide is a heterologous signal peptide.

Claim 24 (Withdrawn): The fusion protein of claim 22 wherein the second polypeptide has adjuvant activity.

Claim 25 (Previously presented): A method for producing a polypeptide encoded by the nucleic acid of claim 1 , comprising the step of culturing a unicellular host transformed with the nucleic acid molecule of claim 1.

Claim 26 (Withdrawn): An antibody against the polypeptide of claim 21.

Claim 27 (Withdrawn): A vaccine comprising at least one first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14; ~~and~~

(ii) an immunogenic fragment consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14.

Claim 28 (Withdrawn): A vaccine comprising at least one fusion protein, wherein the fusion protein comprises:

(a) a first polypeptide selected from:

(i) a polypeptide whose sequence is set forth in SEQ ID No: 14;

(ii) an immunogenic fragment consisting of at least 12 consecutive amino acids from SEQ ID No: 14; and

(iii) a polypeptide which has been modified without loss of immunogenicity, wherein said modified polypeptide is at least 95% identical in amino acid sequence to SEQ ID No:14; and

(b) a second polypeptide.

Claim 29 (Withdrawn): The vaccine of claim 28 wherein the second polypeptide is a heterologous signal peptide.

Claim 30 (Withdrawn): The vaccine of claim 28 wherein the second polypeptide has adjuvant activity.

Claim 31 (Withdrawn): A vaccine comprising at least one first polypeptide according to claim 20 and an additional polypeptide which enhances the immune response to the first polypeptide.

Claim 32 (Withdrawn): The vaccine of claim 31 wherein the additional polypeptide comprises a *Chlamydia* polypeptide.

Claim 33 (Withdrawn): A pharmaceutical composition comprising the polypeptide according to claim 20 and a pharmaceutically acceptable carrier.

Claim 34 (Withdrawn): A pharmaceutical composition comprising the vaccine according to claim 27 and a pharmaceutically acceptable carrier.

Claim 35 (Withdrawn): A pharmaceutical composition comprising the antibody according to claim 26 and a pharmaceutically acceptable carrier.

Claim 36 (Currently amended): A method for preventing or treating *Chlamydia* infection comprising administering to a patient an effective amount of:

(a) the nucleic acid of claim 2;

(b) an immunogenic composition comprising a vaccine vector and at least one nucleic acid of claim 2; or

(c) a pharmaceutical composition comprising the nucleic acid of claim 2 and a pharmaceutically acceptable carrier~~;~~.

~~(d) a polypeptide encoded by the nucleic acid sequence of claim 2,~~

~~or~~

~~(e) an antibody against the polypeptide defined in (d).~~

Claim 37 (Currently amended): A method of detecting *Chlamydia* infection comprising the step of assaying a body fluid of a mammal to be tested, with the nucleic acid of claim 2. ~~a component selected from:~~

~~(a) the nucleic acid of claim 2;~~

~~(b) a polypeptide encoded by the nucleic acid of claim 2; and~~

~~(c) an antibody against the polypeptide defined in (b).~~

Claim 38 (Currently amended): A diagnostic kit comprising instructions for use and the nucleic acid of claim 2. ~~a component selected from:~~

~~(a) the nucleic acid of claim 2;~~

~~(b) the polypeptide encoded by the nucleic acid of claim 2; and~~

~~(c) an antibody against the polypeptide defined in (b).~~

Claim 39-78 (Cancelled)

Claim 79 (Previously presented): The isolated nucleic acid molecule of claim 2, comprising a nucleic acid sequence selected from:

(a) SEQ ID No: 1; and

(b) a sequence which encodes SEQ ID No:14.

Claim 80 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is selected from:

(i) SEQ ID No: 1; and

(ii) a nucleic acid sequence which encodes SEQ ID No: 14.

Claim 81 (Previously presented): The isolated nucleic acid molecule of claim 2, comprising a nucleic acid sequence selected from:

(a) at least 38 consecutive nucleotides from SEQ ID No: 1; and

(b) a sequence comprising at least 100 consecutive nucleotides from a sequence which encodes SEQ ID No:14.

Claim 82 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is selected from:

(i) a nucleic acid sequence comprising at least 38 consecutive nucleotides from SEQ ID No:1; and

(ii) a nucleic acid sequence which encodes an immunogenic fragment comprising at least 12 consecutive amino acids from SEQ ID No: 14.

Claim 83 (Previously presented): The vaccine vector of claim 8 wherein the at least one nucleic acid is operably linked to a viral promoter functional in a mammalian cell.